Abstract

A system for detecting tactile information includes strain-gauge touch sensors and a controller. Based on the sum output from each of touch-sensor sensor units, an analyzer in the controller calculates touch force $F_i(t)$ at each measurement point. An automatic gain control adjusts the voltage amplitude $A_i(t)$ of a sine wave of frequency f_i applied to the sensor units at each measurement point to bring the voltage amplitude measured at each measurement point into line with a target voltage, and, via a bandpass filter, applies to each sensor unit a composite sine wave $y(t)$ that includes sine waves of each frequency provided with the thus-adjusted voltage amplitude $A_i(t)$. This makes it possible to reduce the number of lines between the controller and touch sensors that include numerous measurement points, and enables the gain of the touch sensors constituted by strain gauges to be controlled within an appropriate range.